

REMARKS

Reconsideration of the present application is respectfully requested in light of the above amendments to the application and the following remarks.

Regarding the Claims

Claims 1-8 and 26-34 of Group I were elected for prosecution and Claims 9-25 have been withdrawn; Claim 26 has been amended and new Claims 35-44 have been added. Currently pending in the application, therefore, are Claims 1-8 and 26-44. No new matter has been added.

Claims 1-8 and 26-34 have been rejected under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. 103(a) as obvious over Hirahara et al. 6,064,560 ("Hirahara"). The Examiner states that Hirahara's figures teach an active carbon having the claimed pore characteristics. The Examiner states that while pH, etc., are not taught, the carbon appears to be the same, as the high oxygen content of the precursor of Hirahara would create a large number of surface groups and thus a high pH.

LACK OF PRIOR IMPLEMENTATION

If the claimed subject matter is an obvious extension of the art claimed in Hirahara, it would have been implemented earlier. However, the difficulty of producing an active carbon having the claimed pore characteristics and accompanying pH for use in water has preventing implementation of the subject matter to this point. This lack of implementation supports Applicant's argument that the subject matter is allowable. "That an inventor has probed the strengths and weaknesses of the prior art and discovered an improvement that escaped those who came before is indicative of unobviousness, not obviousness." *Fromson v. Anitec Printing Plates, Inc.*, 45 U.S.P.Q.2d 1269 (Fed. Cir. 1997).

PRIMA FACIE CASE OF OBVIOUSNESS

To establish *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Roy*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.P.A. 1974).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention when there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 2221 U.S.P.Q. 929, 933 (C.A.F.C. 1984).

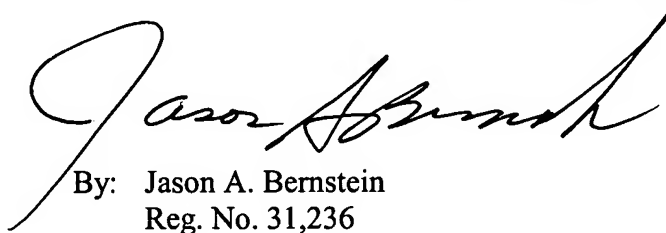
The carbon material of the present invention is useful in removing target compounds dissolved in water. Claim 1 of the present invention describes a carbon material having a particular pore size range and also recites a particular pH range. In comparison, Hirahara describes a carbon material intended for negative electrode materials (col. 1, line 10-13) and for removal of gases (see col. 3, line 23 and col. 1, line 30). Specifically, Hirahara states that its carbon is “useful in a technical field of...negative electrode materials for lithium secondary cells, water treatment, sewage treatment, waste water treatment...” (col. 1, line 10-13). Fundamentally, creating a negative electrode material that is useful for removing such positively charged species as Lithium (Li⁺), as described by Hirahara would normally have a low pH range associated therewith. The discussion of waste water treatment (col. 1, line 13) is believed to be intended as absorption of gases (for example, H₂S) dissolved in sewage and waste water, not organic compounds in liquid. Adsorption of gas is less pH sensitive and less surface chemistry sensitive than adsorption of dissolved compounds in water because gases condense in the pores, a physical interaction, rather than surface adsorption, a more chemical related interaction. With surface adsorption the surface chemistry, including pH, affects adsorption characteristics. Hirahara

neither anticipates nor does disclose, teaches or suggests a carbon material or method of making same that provides the pore size range and high pH range of the present invention. Further, there is no motivation in Hirahara to investigate or define pH range as a characteristic of the activated carbon.

The Examiner states that Hirahara implies a high pH. In reality it is normally the case that the higher the oxygen content the lower the carbon pH because oxygen content often is correlative with the presence of lactone, carboxyl or other oxygenated functional groups and these groups have pH levels (lactone pH is ~6-8; carboxyl pH is ~3-5) that drive the pH down.

For the reasons stated above, then, Applicant respectfully submits that Hirahara fails to anticipate the present invention as claimed. For the same reasons as stated above Hirahara does not render the present invention obvious. Applicant respectfully submits that the new and amended claims overcome the Examiner's rejections and are in condition for allowance and Applicant requests the same. Should the Examiner have questions or suggestions which will put this application in line for allowance, he is requested to contact the undersigned attorney.

Respectfully submitted,
POWELL, GOLDSTEIN, FRAZER & MURPHY LLP



By: Jason A. Bernstein
Reg. No. 31,236

16th Floor
191 Peachtree Street, NE
Atlanta, Georgia 30303-1736
(404) 572-6900
jbernstein@pgfm.com